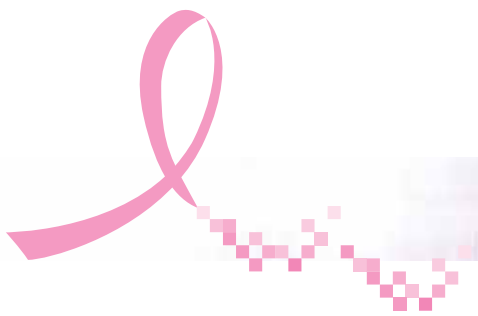


**CHAPTER 3**  
**PHYSICAL AND PSYCHOSOCIAL**  
**IMPACT OF BREAST CANCER AND**  
**ITS TREATMENT**

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## CHAPTER 3

# PHYSICAL AND PSYCHOSOCIAL IMPACT OF BREAST CANCER AND ITS TREATMENT

Being diagnosed with breast cancer can be overwhelming for a woman. During treatment or recovery, women often experience emotional turmoil as a result of physical, emotional and social changes. This chapter collects and

analyses information about the psychosocial and physical impact of breast cancer on 12,163 patients in our cohort. The average time at which patients did the survey was 3.7 years after initial cancer diagnosis.

### Key findings

#### Physical impact of treatments

- ▶ Around two-thirds (66.6%) of our patients who had surgery experienced no or minimal discomfort. Wound pain (16.2%) was the most common form of discomfort experienced after surgery.
- ▶ 55.2% of our patients who had chemotherapy experienced a severe level of physical discomfort due to side effects. Vomiting (24.4%) and loss of appetite (17.5%) were the most common forms of discomfort experienced after chemotherapy.
- ▶ 65.3% of our patients who had radiotherapy experienced no or minimal discomfort. Skin burns (9.9%) were the most common form of discomfort experienced after radiotherapy in our patient cohort.
- ▶ 80.0% of our patients who had undergone endocrine therapy experienced no or minimal discomfort. Hot flushes (11.2%) was the most common form of discomfort experienced after endocrine therapy in the patient cohort, followed by bone pain (4.8%).
- ▶ 81.1% of our patients who had undergone targeted therapy experienced no or minimal levels of discomfort. Fatigue (4.7%) was the most common form of discomfort experienced after targeted therapy in our patient cohort.
- ▶ Majority (95.1%) of our patients who received complementary and alternative therapies felt no or minimal levels of discomfort.

#### Psychosocial impacts and adjustments after diagnosis and treatment

- ▶ At the time of diagnosis, 32.0% of our patients accepted their diagnosis but felt depressed while 22.5% calmly accepted their diagnosis.
- ▶ After treatment, 46.0% of our patients felt that life was not fair.
- ▶ 54.1% of our breast cancer survivors reported having a positive change in their outlook on life and 91.5% had a positive or no change in their self-image.
- ▶ 82.6% of our patients reported changes in their lifestyle after diagnosis with breast cancer. A change in diet (74.8%) was the most common lifestyle change, followed by increased exercise (61.6%).
- ▶ 54.8% of patients managed their negative emotions by direct verbal expression, while 34.3% diverted their attention away from negative emotions.
- ▶ 57.8% of patients always or sometimes worried about recurrence. The number of our patients who never worried about recurrence increased with increasing age.

### 3.1 Physical discomfort after treatment

#### 3.1.1 Physical discomfort after surgery

Around two-thirds (66.6%) of our patients who had surgery experienced no or minimal discomfort, while 10.1% of them experienced severe discomfort (Figure 3.1). The proportion of our patients reported feeling severe physical discomfort was highest among the patients who had undergone mastectomy and reconstruction (Figure 3.2). In our patient cohort, wound pain (16.2%) was the most common form of discomfort experienced after surgery, followed by difficult in arm movement (6.0%) and wound problems such as infection, inflammation etc. (6.0%) (Table 3.1).

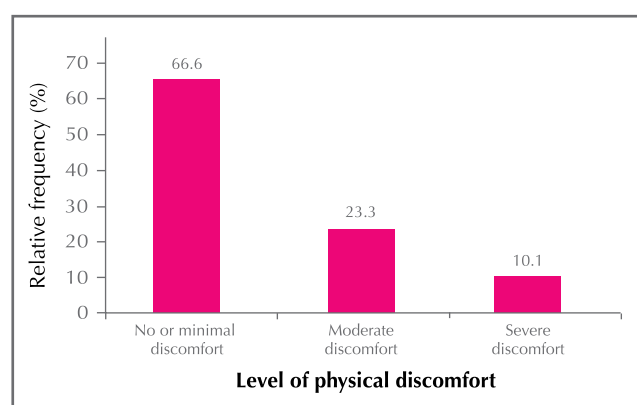


Figure 3.1 Level of physical discomfort after surgical operations (N=12,313)

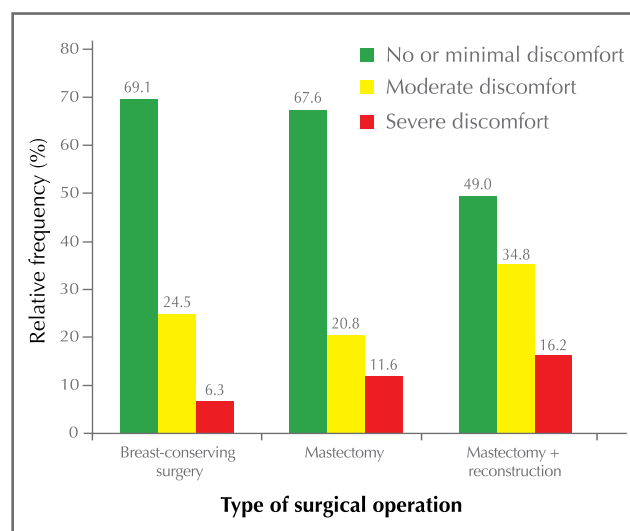


Figure 3.2 Level of physical discomfort by type of surgery (N=12,255)

Table 3.1 The five most common forms of discomfort after surgery (N=12,313)

	Number	(%)
Wound pain	1,998	(16.2)
Wound problems (infection / inflammation / tightness / poor wound healing)	743	(6.0)
Difficulty in arm movement	743	(6.0)
Numbness	408	(3.3)
Lymphoedema	390	(3.2)

### 3.1.2 Physical discomfort after chemotherapy

55.2% of our patients who had chemotherapy experienced a severe level of physical discomfort due to side effects (Figure 3.3). Vomiting (24.4%) and loss of appetite (17.5%) were the most common forms of discomfort experienced after chemotherapy (Table 3.2) in our patient cohort.

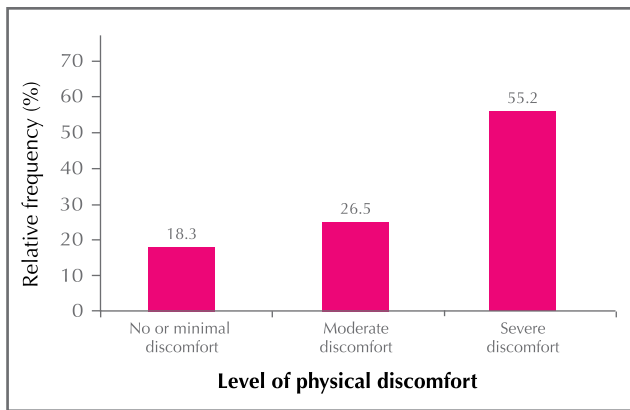


Figure 3.3 Level of physical discomfort after chemotherapy (N=7,513)

Table 3.2 The five most common forms of discomfort after chemotherapy (N=7,513)

	Number	(%)
Vomiting	1,833	(24.4)
Loss of appetite	1,314	(17.5)
Hair loss	1,083	(14.4)
Weakness	779	(10.4)
Nausea	618	(8.2)

### 3.1.3 Physical discomfort after radiotherapy

65.3% of our patients who had radiotherapy experienced no or minimal discomfort, while 13.1% of them experienced severe discomfort (Figure 3.4). Level of discomfort was higher in patients who had undergone chest wall irradiation than those who had breast irradiation, regardless of whether or not they had undergone regional nodes irradiation (Figure 3.5). Skin burns (9.9%) were the most common form of discomfort experienced after radiotherapy in our patient cohort (Table 3.3).

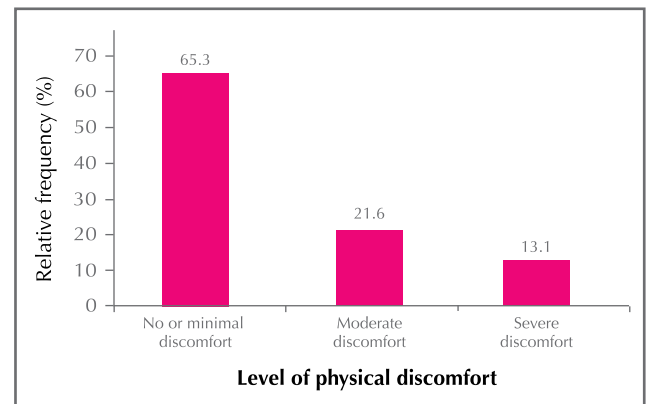
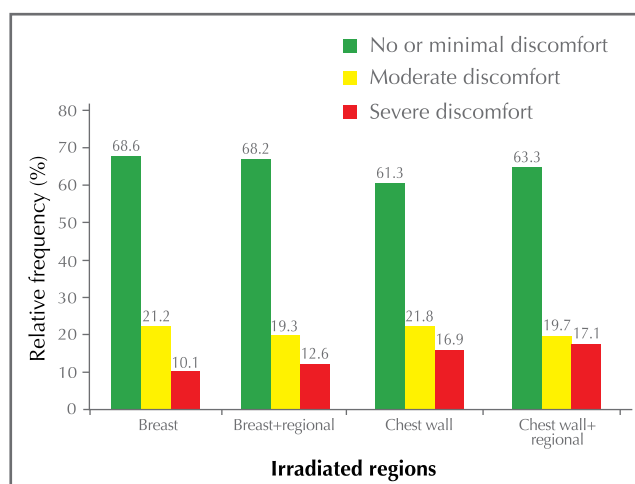


Figure 3.4 Level of physical discomfort after radiotherapy (N=7,424)



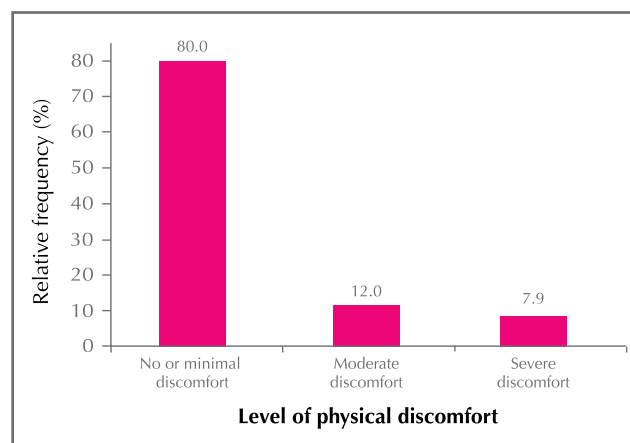
**Figure 3.5** Level of physical discomfort after radiotherapy by irradiated regions (N=7,424)

**Table 3.3** The five most common forms of discomfort after radiotherapy (N=7,424)

	Number	(%)
Skin burns	736	(9.9)
Dry skin	639	(8.6)
Pain	361	(4.9)
Fatigue	177	(2.4)
Skin ulceration	165	(2.2)

### 3.1.4 Physical discomfort after endocrine therapy

80.0% of our patients who had undergone endocrine therapy experienced no or minimal discomfort, whereas only 7.9% of patients said they experienced severe discomfort (Figure 3.6). Hot flushes (11.2%) was the most common form of discomfort experienced after endocrine therapy in the patient cohort, followed by bone pain (4.8%).



**Figure 3.6** Level of physical discomfort after endocrine therapy (N=7,735)

**Table 3.4** The five most common forms of discomfort after endocrine therapy (N=7,735)

	Number	(%)
Hot flushes	867	(11.2)
Bone pain	371	(4.8)
Menstrual Disorder	353	(4.6)
Tiredness	320	(4.1)
Weight gain	130	(1.7)

### 3.1.5 Physical discomfort after targeted therapy

81.1% of our patients who had undergone targeted therapy experienced no or minimal levels of discomfort, while 6.6% experienced severe discomfort (Figure 3.7). Fatigue (4.7%) was the most common form of discomfort experienced after targeted therapy in our patient cohort (Table 3.5).

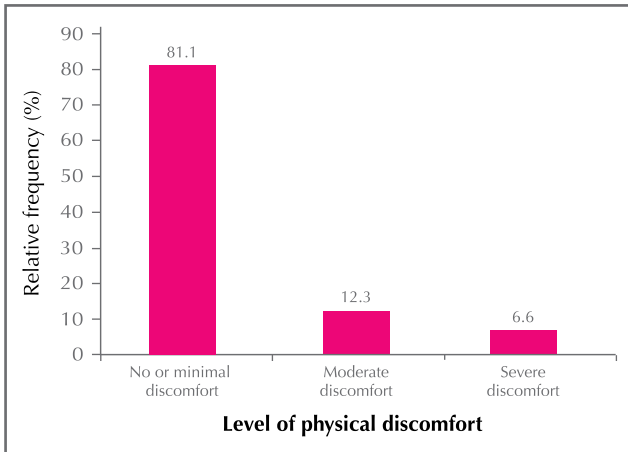


Figure 3.7 Level of physical discomfort after targeted therapy (N=1,008)

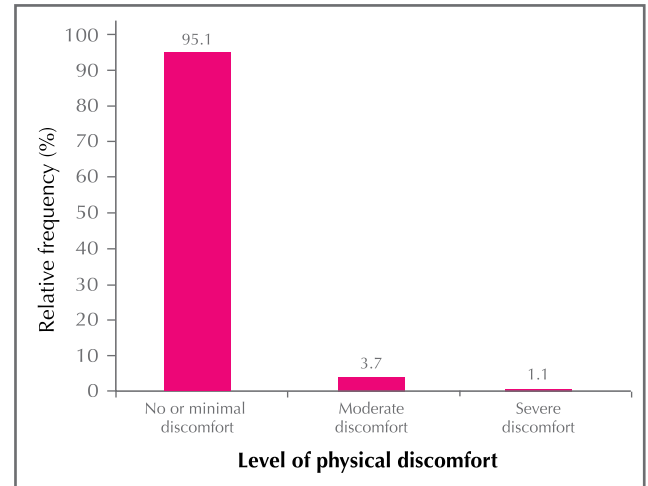


Figure 3.8 Level of physical discomfort after complementary and alternative therapies (N=3,156)

Table 3.5 The five most common forms of discomfort after targeted therapy (N=1,008)

Discomfort	Number	(%)
Fatigue	47	(4.7)
Pain	27	(2.7)
Other organs affected	18	(1.8)
Numbness	15	(1.5)
Dizziness	14	(1.4)

### 3.1.6 Physical discomfort after complementary and alternative therapies

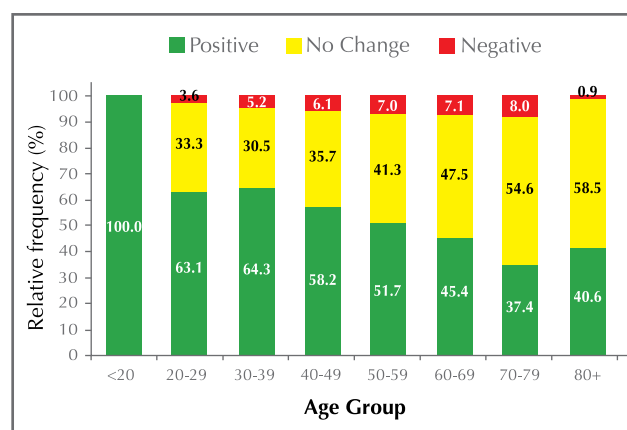
Majority (95.1%) of our patients who received complementary and alternative therapies felt no or minimal levels of discomfort (Figure 3.8).

**Table 3.6 Psychosocial impacts of breast cancer on our patients**

	Number	(%)
<b>Feelings at time of breast cancer diagnosis (N=11,843)</b>		
Acceptance and positive attitude to fight	2,569	(21.7)
Calm acceptance	2,666	(22.5)
Acceptance with depression	3,795	(32.0)
Lack of acceptance ("It cannot be true.")	2,554	(21.6)
Acceptance with anger ("Something must be wrong.")	259	(2.2)
<b>Feelings after breast cancer treatments (N=9,459)</b>		
Life was not fair	4,350	(46.0)
Cancer was an alarm that caught patient by surprise	3,135	(33.1)
Cancer changed patient's value system	1,332	(14.1)
Cancer took away something from patient	642	(6.8)
<b>Change in outlook on life (N=11,907)</b>		
Positive	6,444	(54.1)
Negative	762	(6.4)
No change	4,701	(39.5)
<b>Change in self-image (N=11,907)</b>		
Positive	5,067	(42.5)
Negative	1,011	(8.5)
No change	5,829	(49.0)

In our patient cohort, positive change in their outlook on life was negatively correlated with increasing age, with the exception of patients in the age groups 30-39 and 80+. No change in the outlook on life was positively correlated with increasing age, with the exception of patients in the 20-29 age group (Figure 3.9).

In our patient cohort, positive change in self-image was reduced with increasing age, with the exception of patients under age 29 and above 80 years of age. Positive change in self-image was lower in our patients in the age group of 20-29 than patients who are 30-59 of age (Figure 3.10).



**Figure 3.9 Change in outlook on life by age group (N=11,740)**

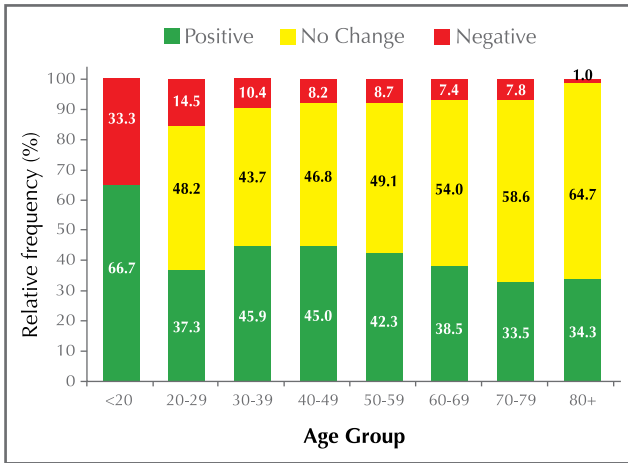
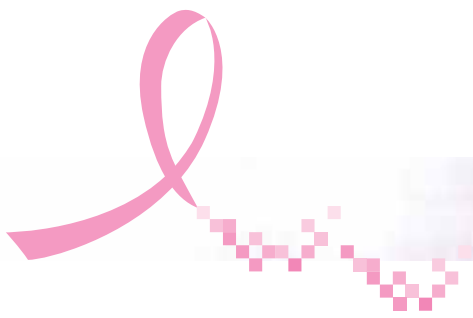


Figure 3.10 Change in self-image by age group (N=11,744)

### 3.2.2 Psychosocial adjustments and coping strategies

Out of 12,163 patients in our cohort, 10,042 (82.6%) reported changes in their lifestyle after diagnosis with breast cancer. A change in diet (74.8%) was the most common lifestyle change, followed by increased exercise (61.6%). 12.3% of our patients quit their jobs (Table 3.7).

In our patient cohort, 54.8% of patients managed their negative emotions by direct verbal expression, while 34.3% diverted their attention away from negative emotions. However, 10.9% of our patients ignored their negative emotions, while 7.6% felt depressed (Table 3.7).

### 3.2.3 Levels of worry about recurrence

In the patient cohort, 57.8% of patients always or sometimes worried about recurrence (Table 3.7). The number of our patients who always or sometimes worried about recurrence was reduced with increasing age (with the exception of patients of 20-29 years of age), whereas the number of our patients who never worried about recurrence increased with increasing age (Figure 3.11).

Table 3.7 Psychosocial adjustments and coping strategies for survivorship

	Number	(%)
<b>Types of lifestyle changes (N=10,042)</b>		
Changing diet	7,513	(74.8)
Doing more exercise	6,186	(61.6)
Taking health supplements	2,516	(25.1)
Reducing workload	1,983	(19.7)
Quitting job	1,236	(12.3)
<b>Way of managing negative emotions (N=12,163)</b>		
Direct verbal expression	6,662	(54.8)
Divert attention from them	4,168	(34.3)
Ignoring them	1,321	(10.9)
Feeling depressed	926	(7.6)
Others	981	(8.1)
<b>Level of worry about recurrence (N=11,899)</b>		
Never	2,955	(24.8)
Seldom	2,068	(17.4)
Sometimes	5,616	(47.2)
Always	1,260	(10.6)

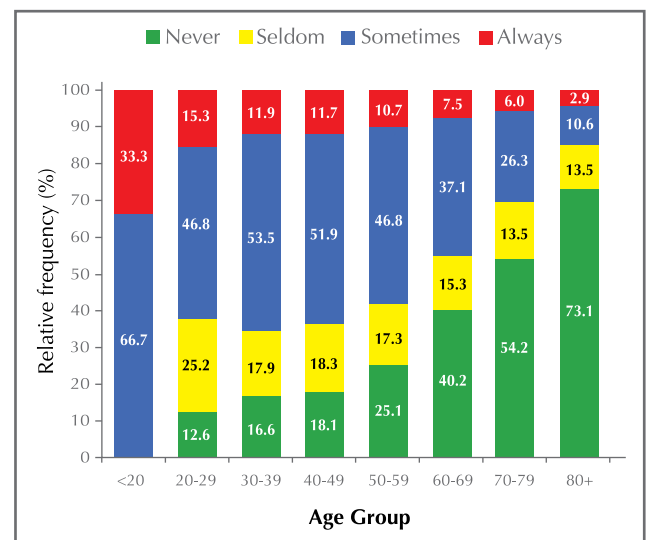


Figure 3.11 Level of worry about recurrence by age group (N=11,730)